NUSNNI - Chemistry Seminar

Date: 08 July 2005, Friday
Time: 10:00am - 11:00am
Venue: Room SR28 at S7-03, Faculty of Science

Speaker : Professor Peng Xiagang, Dept of Chemistry & Biochemistry, University of Arkansas, Fayetteville

Title: ***What determines the size, shape, and properties of colloidal nanocrystals?***

Abstract:
Size and shape control is the first challenge in the field of high quality colloidal nanocrystals if one wants to exploit their size/dimension dependent properties. Unfortunately, classic theories of crystallization do not provide sufficient guidelines for us. This talk will explore possibilities and mechanisms of nanocrystal growth in solution. The results suggest that crystallization studies in nanometer size regime can be fruitful, certainly more so than the traditional approaches with largely sized crystals. The quantitative and qualitative knowledge obtained will be demonstrated for guiding development of “greener methods” for synthesis of high quality colloidal nanocrystals with a variety of compositions. Some unexpected aspects about crystallization—from classic crystallization viewpoint—will also be discussed.